REMARKS

The Office Action mailed on December 31, 2007, noted that trademarks had been used in the specification without indicating their proprietary status. Claim 12 was objected to on the basis of an informality related to a missing period. Claims 20-22, 25 and 26 were rejected as indefinite under §112. Amendments made above address all of these issues and informalities. Other informalities have also been addressed in the above amendments.

The Office Action also rejected claims 1-20 and 23-26 as anticipated by US Patent No. 5,758,079 to Ludwig et al. ("Ludwig"), and claims 21-22 as obvious over Ludwig in view of Published Application no. 2002/0133473 to Grande et al. ("Grande"). The claims have been amended to more clearly reflect differences in the claimed embodiments as compared to the cited references. The claims in their current form are allowable, and the rejections are traversed for the reasons below.

A.   SUMMARY OF ARGUMENTS:

It is submitted that all independent claims are allowable for at least the following reasons:

- Ludwig's elements 100/800 cited by the Office Action as disclosing the "network interfaces" recited by claim 1 are at Ludwig's network endpoint (conference attendee) and therefore cannot meet the requirements of the claimed network interfaces.

- Ludwig fails to disclose selectively linking a requestor to one *but not the other* of the network interfaces as required by claim 1.

- Ludwig fails to disclose the steps of data stream management for two different virtual meetings required by independent claims 19 and 24. In its rejection, the Office Action improperly cites a portion of Ludwig that simply discloses adding a new attendee to an existing first conference only – not to *two different meetings* as claimed. col. 24, lines 39-41.

It is also submitted that multiple dependent claims are allowable on an independent basis including the following:

- Claim 11: The Office Action cites Ludwig's network endpoint elements as including the recited network interfaces while *simultaneously* citing Ludwig's routers/bridges as containing those interfaces. The routers/bridges, however, are *upstream* from the endpoint elements (See Fig. 1) and therefore *cannot include the endoints*.

- Claim 12: The Office Action cites Ludwig's ports 101, 102, and 103 as disclosing the separate ports for stream data and control portions recited by claim 12. Ludwig teaches that ports 101, 102, and 103, however, are simply *standard PC ports for connecting a monitor, mouse and keyboard*. Col. 15, lines 15-18.

- Claim 13 requires steps of managing data streams during different *first and second* virtual meetings. Ludwig fails to disclose these elements, and the Office Action improperly cites a portion of Ludwig that simply teaches adding attendees to *a first meeting* to reject this claim. Col. 24, lines 39-42.

- Claim 15 requires a plurality of cameras in at least some conference rooms. The Office Action suggests Ludwig's Fig. 31C discloses this. That figure, however, shows *only a single* camera at each user.

- Claim 16 requires designating one of the network interfaces as a high bandwidth interface and of connecting the highest bandwidth data stream to that interface. Ludwig fails to disclose this. The Office Action cites a portion of Ludwig that simply discloses using various applications to reject this. Col. 3, lines 49-54.

- Claim 17 requires an interface between unicast and multicast communications. The Office Action cites a portion of Ludwig that only discloses application data can be shared. col. 6, lines 10-20. Ludwig fails to disclose what format the data is communicated in, however, much less teaching a unicast / multicast interface as claimed.

- Claim 26: Ludwig fails to disclose assigning first through fourth interfaces with identifiers useful to manage data streams during *two different virtual meetings* as recited by claim 26. To reject this claim the Office Action cites a portion of Ludwig that discloses adding a new attendee to a *first meeting only*. col. 24, lines 39-41.

These reasons are discussed in detail below.

B. LUDWIG'S CMW COMPONENTS 100/800 ARE A NETWORK ENDPOINT AND THEREFORE CANNOT ANTICIPATE CLAIM 1'S RECITED NETWORK INTERFACES

Claim 1 requires, among other elements, linking first and second data streams communicated from attendees to first and second network interfaces, respectively. The Office Action cites Ludwig's Fig. 18, elements 100/800 as disclosing this. Fig. 18 and elements 100/800, however, illustrate a *network endpoint* (i.e., conference attendee): "Fig. 18A and 18B illustrate various preferred embodiments of a CMW (collaborative multimedia workstation)..." (col. 4, lines 58-60), and "..multimedia local area networks (MLAN) 10 connects, via lines 13, a plurality of CMW's 12-1 to 12-10 ..." (col. 6, lines 2-4), see also Fig. 1. Claim 1, on the other hand, has been amended to make clear that the recited first and second network interfaces are separate from attendee computers from which data streams are communicated to the network (e.g., Ludwig's 100/800).

C. LUDWIG FAILS TO DISCLOSE CLAIM 1'S RECITATION OF LINKING A REQUESTOR TO ONLY ONE INTERFACE

Claim 1 has also been amended to clarify that a requestor can selectively link to one but not the other of the first and second interfaces. This provides useful benefits and advantages. As explained in the specification, this allows an attendee to tailor his virtual meeting experience and choose which streams to receive. Page 10. This also allows for limited bandwidth users to connect at lower bandwidth by selectively linking to a lower bandwidth stream interface. Id.

D. CLAIMS 19 AND 24 RECITE ELEMENTS OF MANAGING DATA COMMUNICATIONS FOR TWO DIFFERENT VIRTUAL MEETINGS – LUDWIG FAILS TO DISCLOSE THIS

Independent claims 19 and 24 also stand rejected as anticipated by Ludwig. Claim 19 has been amended to recite steps of managing data streams communicated during two different virtual meetings that are at least partially concurrent with one another. For example, claim 19 recites linking first and second data streams from *first*

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meeting attendees to first and second interfaces, respectively, and further recites linking first and second data streams from *second meeting attendees* to third and fourth network interfaces, respectively. These steps provide useful benefits for managing traffic during different and at least partially concurrent virtual meetings as discussed in the specification. Pages 2 and 8-10. The large number of data streams being communicated can otherwise cause disorganization and inefficiency. Id.

Independent claim 24 recites similar steps of managing data streams during two different virtual meetings that are at least partially concurrent. Claim 24 recites receiving at least a video and audio stream from first meeting attendees and from second meeting attendees, and linking only the first meeting video streams to a first network interface, the first meeting audio streams to a second interface, the second meeting video streams to a third network interface, and the second meeting audio streams to a fourth network interface. Claim 24 further recites that a requestor can choose which streams to receive whereby only one of the network interfaces can be linked to.

It is submitted that Ludwig fails to disclose or suggest these elements, with the result that claims 19 and 24 are allowable. It is noted that similar limitations were present in original claim 13. In rejecting claim 13 as anticipated by Ludwig, the Office Action alleged col. 24, lines 39-42 disclosed two concurrent virtual meetings. This portion of Ludwig, however, discloses a step of adding new attendees to a *first* meeting only: "The first way (for initiating a conference call) is to add one or more parties to an existing two-party call." There is no disclosure of a *different second meeting* that is at least partially concurrent with the first. Should this rejection not be withdrawn, clarification is requested.

In rejecting claim 13 the Office Action further cited Fig. 18, elements 100, 800 as satisfying the claimed first, second, third and fourth network interfaces being used in two different meetings. As discussed above with reference to claim 1, these elements cannot satisfy the first and second interfaces, but it is further noted that claim 13 (as well as claims 19 and 24) recite *four different* interfaces that different data streams are linked to during *two different virtual meetings*. Fig. 18, elements 100, 800 cannot satisfy this

since this discloses only a *single teleconference endpoint* participating in a *single* conference.

Finally, it is noted that claim 19 further recites querying the plurality of first and second meeting attendees to determine what types of data streams will be communicated. Ludwig fails to disclose this step.

E.   SEVERAL DEPENDENT CLAIMS ARE ALLOWABLE FOR OTHER REASONS

Because all of the independent claims are allowable for the reasons discussed above, all of the dependent claims are likewise allowable. Several of the dependent claims are allowable for other reasons as well.

E.(1)   IT IS PHYSICALLY IMPOSSIBLE FOR LUDWIG'S CMW TO BE WITHIN ITS BRIDGE AS REQUIRED BY CLAIM 9

Claim 9 depends from claim 1 and further recites that the first and second network interfaces of claim 1 are within a bridge. The Office Action cites col. 6, line 8 of Ludwig as disclosing this. This portion of Ludwig only discloses that MLANs 10 are linked by bridges/routers 11 (see Fig. 1). These bridges/routers 11, however, are clearly *separate and far upstream* from collaborative multimedia workstation (CMW) 12 (workstation or WS 12.1 to WS 12.10), which are the network endpoints shown in Fig. 18A that that contain elements 100/800 cited as the network interfaces ("One embodiment of a CMW 12 of the invention is illustrated in Fig. 18A." col. 14, lines 63-64).

Accordingly, in rejecting claim 9 over Ludwig, the Office Action takes the contradictory position of citing network endpoints 100/800 (WS 12.1 – 12.10 of Fig. 1) as including the first and second network interfaces of claim 1 while also citing the routers/bridges 11 that are *separate and distantly upstream* from those endpoints as containing the endpoint interfaces. This is physically impossible – the interfaces cannot be located at one place in the network but also be within a bridge located at a distant

second location. This rejection must be withdrawn. If it is not, clarification is requested as to how the claimed interfaces can be cited as being in two different places at once.

E. (2) LUDWIG'S KEYBOARD AND MOUSE PORTS CANNOT SATISFY THE REQUIREMENTS OF CLAIM 12

Claim 12 depends from claim 1 and further recites that the first and second data streams include discrete data and control packets, and that the first and second network interfaces each include a first port linked to the respective data stream data portion and a second port linked to the control portion. The Office Action rejects claim 12 as anticipated by Ludwig and cites col. 15, line 17 as disclosing these elements. This portion of Ludwig, however, discloses a personal computer's "standard peripheral ports 101, 102 and 103" for connecting a standard display monitor 200, keyboard 300, and mouse 400. Col. 15, lines 15-18. This rejection is improper and must be withdrawn. Should it not be withdrawn, clarification is requested as to how a personal computer's standard keyboard, monitor and mouse ports can support an anticipation rejection of the interfaces recited by claim 12.

E. (3) THE FIRST AND SECOND MEETINGS OF CLAIM 13 ARE NOT DISCLOSED BY LUDWIG

Claim 13 depends from claim 1 and further recites a first and second virtual meeting that are at least partially concurrent with one another. As explained above with regard to similar limitations in claims 19 and 24, Ludwig fails to disclose or suggest this. The Office Action cites col. 24, lines 39-42 of Ludwig for disclosing two simultaneous virtual meetings. This is incorrect, however, since this section of Ludwig only discloses adding new attendees to *an existing first meeting* as they call in: "The first way (for initiating a conference call) is to add one or more parties to an existing two-party call." Id. Ludwig fails to make any disclosure of a different second meeting.

The Office Action further cites Fig. 18, elements 100, 800 as satisfying the first, second, third and fourth network interfaces being used in different first and second meetings recited by claim 13. As explained above, however, these elements represent an

add-on box and a personal computer at an end-user point of a single teleconference. The Office Action has offered no explanation as to how this endpoint computer participating in a *single* teleconference can support disclosing four *different* interfaces that are connecting different data streams in *two different virtual meetings*. If this rejection is not withdrawn, clarification is requested.

E. (4) LUDWIG FAILS TO DISCLOSE THE PLURALITY OF CAMERAS OF CLAIM 15

Claim 15 depends from claim 1 and further recites that at least some attendees are conference rooms with a plurality of cameras. The specification explains that this can be useful to facilitate meetings between large groups of people in different conference rooms where one camera focuses on a speaker and a second on the audience, for example. Page 5. In rejecting claim 15 as anticipated by Ludwig, the Office Action alleges Fig. 31C discloses a plurality of cameras in each conference room. Fig. 31C, however, clearly shows only a single camera at attendees CMW 12-1 to 12-3. No single conference room in Ludwig has a plurality of cameras, and no other portion of Ludwig discloses multiple cameras at any one conference room. This rejection is therefore improper. Should it not be withdrawn, clarification is requested as to how the single camera in each CMW 12-1, 12-2 and 12-3 of Fig. 31C can support the rejection of claim 15.

E. (5) LUDWIG FAILS TO DISCLOSE THE HIGH BANDWIDTH LIMITATIONS OF CLAIM 16

Claim 16 depends from claim 1 and further requires designating one of the first or second data interfaces as a high bandwidth interface, and linking the highest bandwidth data stream to this interface. The Office Action cites col. 3, lines 49-54 of Ludwig as disclosing this. This portion of Ludwig, however, only discloses that some users may use various applications. It does not teach or suggest designating one interface as a high bandwidth interface and linking the highest bandwidth data stream to that interface. Should this rejection not be withdrawn, clarification is requested.

E. (6) LUDWIG FAILS TO DISCLOSE INTERFACING BETWEEN UNICAST AND MULTICAST

Claim 17 depends from claim 1 and further recites that at least one of the first and second network interfaces interface between unicast and multicast communications. The Office Action cites col. 6, lines 10-20 of Ludwig as disclosing this element. This portion of Ludwig, however, makes no teaching of either unicast or multicast communications. Instead, this portion simply discloses that data such as video, textual, graphics, TV feeds, and the like can be shared during a conference. The protocol for communicating this data (such as unicast or multicast), however, is not disclosed. Further, there is clearly no disclosure or suggestion of providing an interface between unicast and multicast. Should this rejection not be withdrawn, clarification is requested.

E. (7) LUDWIG DOES NOT DISCLOSE THE RECORDING OF CLAIMS 3, 4, OR 20

Claim 3 has been amended to make clear that the step of recording is not limited to recording a time that a requestor linked to an interface, but instead to the recording of the amount of time that the requestor links to the one (but not the other) of the first and second interfaces. Similarly, claim 4 recites recording the amount of data consumed by the requestor. Claim 20 depends from claim 19 and recites steps of recording each of the first and second meeting attendee's usage of each of the first, second, third and fourth network interfaces.

Each of claims 3, 4 and 20 has been held anticipated by Ludwig. The Office Action cites col. 3, line 12 of Ludwig: "Teleconferences may be recorded and stored for later playback ," and further suggests that recording the data consumed as recited by claim 4 is inherent in the "recording" disclosed by Ludwig.

It is submitted, however, that Ludwig's basic disclosure of "recording of a teleconference" is significantly different than the requirements of claims 3, 4 and 20. Ludwig's recording of a teleconference, as best understood, simply means that the presentation of audio, video and data is recorded. This is analogous to recording a

television program with a VCR. While this is useful to record what was *presented*, it is not useful to achieve the requirements of claims 3, 4, and 20 including recording particular connections made during that conference (e.g., the amount of data consumed by an attendee (claim 4) or the usage of first to fourth interfaces during the conference (claim 20)). Referring to the analogy of recording a TV show with a VCR, the recording will not indicate *who watched* that show for *how long* and on *what channel(s)*. Citing Ludwig's disclosure of recording a teleconference to reject these claims represents an improper oversimplification of the claimed elements.

E. (8) Ludwig Fails to Disclose the Password Protection of Claim 23

Claim 23 depends from claim 19 and further recites designating at least one of the first, second, third or fourth interfaces as secure and only allowing access to the secure interface after presentation of a password. The Office Action cites col. 21, line 19 of Ludwig as disclosing use of a password to be logged in. This portion of Ludwig, however, fails to disclose this and instead discusses client service options. In fact, a text search of Ludwig confirms that it does not include the word "password." Should this rejection not be withdrawn, clarification is requested.

E. (9) Ludwig Fails to Disclose the Interface Identifier Elements of Claim 26

Claim 26 depends from claim 24 and further recites steps of assigning identifiers to the first, second, third and fourth network interfaces. The identifiers are useful to designate the respective interface's data stream connection (e.g., first or second meeting, video or audio data). Put another way, practice of claim 26 can result in first to fourth network interfaces having identifiers that carry the following information:

Interface 1: First meeting, video only
Interface 2: Second meeting, video only
Interface 3: Third meeting, audio only
Interface 4: Fourth meeting, audio only

As explained above, Ludwig fails to disclose managing traffic for two different (and at least partially concurrent) virtual meetings. Ludwig further does not disclose assigning identifiers as called for by claim 26.

In rejecting claim 26, the Office Action again cites col. 24, lines 39-41 as disclosing *both* assigning an identifier for a first meeting and assigning an identifier for a second meeting. This portion of Ludwig, however simply discloses adding a new attendee to a *first meeting*: "The first way (for initiating a conference call) is to add one or more parties to an existing two-party call." No disclosure of a second meeting is made, much less assigning a network interface with an identifier corresponding to a first and second meeting. Should this rejection not be withdrawn, clarification is requested as to how this portion of Ludwig may be read to disclose the required elements.

F. CONCLUSION

It is submitted that all independent claims are allowable for at least the following reasons:

- The elements CMW 100/800 of Ludwig alleged to disclose the "network interfaces" recited by claim 1 are at Ludwig's network endpoints (conference attendee) and therefore *cannot meet* the requirements of the network interfaces of claim 1.

- Ludwig fails to disclose linking a requestor to only one selected of the network interfaces as required by claim 1.

- Ludwig fails to disclose the steps of data stream management for *two different* virtual meetings required by independent claims 19 and 24.

It is also submitted that multiple dependent claims are allowable for other reasons including:

- Claim 9 - Ludwig's network endpoint elements CMW 100/800 are cited as being the claimed network interfaces while routers/bridges 11 are simultaneously cited as containing those interfaces. This is *physically impossible* since the routers/bridges 11 are *far upstream* from the endpoint elements 100/800 (See Fig. 1).

- Claim 12 - The Office Action cites Ludwig's ports 101, 102, and 103 as disclosing the separate interfaces for stream data and control portions recited by claim 12. Ludwig teaches that ports 101, 102, and 103, however, are only *standard PC ports* for connecting a monitor, mouse and keyboard. Col. 15, lines 15-18.
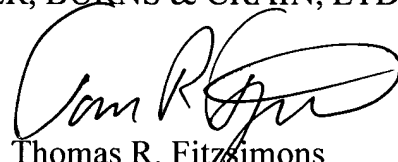
- Claim 16 requires designating one of the network interfaces as a high bandwidth interface and of connecting the highest bandwidth data stream to that interface. Ludwig fails to disclose this. The Office Action cites a portion of Ludwig that only discloses using various applications. Col. 3, lines 49-54.

- Claim 17 requires an interface between unicast and multicast communications. The Office Action improperly cites a portion of Ludwig that only discloses that application data can be shared to reject this. Col. 6, lines 10-20.

- Ludwig fails to disclose assigning first through fourth interfaces with identifiers useful to manage data streams during two different virtual meetings as recited by claim 26. In its rejection, the Office Action improperly cites a portion of Ludwig that simply discloses adding a new attendee to a *first* meeting. col. 24, lines 39-41.

Timely consideration is requested.

Respectfully submitted,

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March 31, 2008

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